3. The claims 1-7 are rejected under 35 USC 103, based on the DeTuillo patent in combination with the Krothmann and Nichols patents. The claims have been amended and new claims 18-20 are presented, to better and more specifically define the invention of claims 1-7. Argument is addressed to the claims as amended.

In summary, applicants submit below that the prior art of Krothmann teaches to prevent soil from entering the slot, whereas in the invention, the slot enables entry of soil into the slot (while aiming to prevent movement into the chamber interior). Krothmann teaches open-ended slots all around an article and no particular basic axis orientation, and no particular "sidewall" orientation. Applicants have spaced apart slots only on an inwardly sloped upwardly running sidewall with downward axis-orientation.

Applicants disagree that DeTuillo shows slots, as stated at examiner paragraph 11. It only shows round perforations have no particular discernible axis orientation. Thus there is no connection with the sidewall/chamber of DeTuillo with Nichols or the present invention. Applicants do agree, with respect to the Nichols patent and other art, that it is known to have downwardly sloped slots.

Applicants submit in more detail now why it is not obvious to combine Krothmannn with Nichols/DeTuillo and why the invention is not obvious.

1. The Krothmann et al. patent describes a pipe segment; and, suggests that the device can be used vertically (well screen) or horizontally in a trench (drain). In the latter case, there are slots on the top and bottom of the device, and the basic axes of the slots are every which way, not downwardly sloped. (See also the earlier Krothmann patent, No. 4,626,129.) Krothmann at his Background notes the pre-existence of horizontal slots and spiral slot in well screens. Col. 1, lines 32-48.

If as examiner says, and applicants agree, the purpose of prior art leaching chamber slots is to inhibit entry of soil into the chamber. So, where is the need stated to use the invention of Krothmann with respect to horizontal slots with a Nichols chamber? Respectfully, examiner is using hindsight. First, there is no need suggested from the prior art, as there must be.

Second, the examiner says the motivation would be to preclude clogging. But there is a contradictory motivation, not to use inward flare, and detailed at No. 4 below, and using inward flare in some respects will be worse. So, there is no net motivation, and it is not obvious that applying Krothmann would be better.

2. The combination of Krothmann and Nichols would be to put inward flare slots in any direction, not just horizontal, and they would have no basic axis with downward slope. If Krothmann is a teaching, and the slots prevent entry of soil regardless of orientation, then why would one selectively provide the Nichols chamber downward horizontal slots with in-flare? That would be picking and choosing in the prior art, using hindsight.

3. Krothmann is concerned only with ingress, with water flowing into the interior of the device. See Krothmann at Col. 1, 5-8; Col. 4, lines 11-13. Applicants' chamber is for leaching which involves water egress. Thus, in the first instance, leaching chambers do not present the same problem as Krothmann addresses. Water flowing out would tend to carry the particles away. Again there is no obvious need. And, is not obvious to combine the teaching because of the different flow directions. (While Nichols/DeTuillo chambers are not configured for draining, they might be used for such, more than likely with geotextile to prevent entrainment/entry of particles.)

4. There is prior teaching away from using inward flare of slot or other perforation in combination with a basic axis on a downward slope. If a slot has an outward flare, or even no flare, then the slot bottom has an equal or greater slope than the basic slope. That is desired, from the standpoint of shedding soil downwardly. As a corollary, to flare the slot inwardly, and decrease the slope of the bottom of the slot is bad. Please see page 7, lines 10-14 of the application, where the teaching away is further elaborated upon, namely the object of making large the total surface area of slot opening at the chamber exterior surface. And, at page 8, first full paragraph, applicants describe the unexpected advantage of the invention, and they mention how there would be no unexpected advantage of the kind they describe, if the chamber sidewalls were vertical -- which is what Krothmann in the first instance describes.

5. The Krothmann slots are open longitudinally at one end. Col. 2, line 35-41; Col. 3, line 44-57. The slots are made by slidably withdrawing a die lengthwise relative to the axis of the circular well point. Krothmann does not teach closed end spaced-apart slots, nor any way in which such slots could be made in his device, much less in chambers. A die part sliding lengthwise would hit adjacent parts of the chamber. So, there is no teaching of how out the Krothmann slots can be carried out on the Nichols '661 chamber. (In fact, the invention of the withdrawn restricted claims was needed to feasibly make the present invention.) It is required for obviousness that the combination will work, and that is not the case here. And even if the Krothmann teaching was somehow applied to a Nichols chamber, it would provide a chamber with slots having longitudinal open ends.

6. Krothmann and the Background technology it mentions, teach away from applicants' invention. They teach a slot which prevents soil from entering the slot. That is the reason Krothmann slots will work when running vertically or on any orientation. Krothmann teaches putting slots all around the article, which teaches to put the slots on the top as well. To say that the combination of art teaches only putting Krothmann flare slots where Nichols has slots, or where DeTuillo has holes, is using hindsight.

7. Applicants' perforations, and those slots in prior art leaching chambers, must be only on the sidewalls and must have basic axes which run downwardly to be useful with respect to soil entry. A reason this is so is because the present invention perforations are shaped to enable a degree of entry of soil into the slots.

The rejection says cites Nichols '661 at Col. 4, line 44-47, with respect to the non-entry of fine particles into the chamber interior. Applicant agrees that is a purpose with respect to preventing soil entry into the chamber interior, but that does not preclude entry of soil into the slots themselves. The old Nichols '661 design, shown in Fig. 9 and 10, had a slot where the top is a lip which extends out beyond the sidewall part which defines the bottom of the slot. It is that configuration which the examiner-cited text says inhibits soil from entering the slot and chamber.

In an updated conception of chambers and their function, there is not the stuck-out top lip on slots, and soil enters at least a portion of the slots in use. See Fig. 9A of Nichols 5,511,903 (previously cited), copy attached. See also Fig. 2 in the present application. Applicants explain at the last 3 lines on page 7, that such entry can be beneficial in providing more leaching area. (See also the immediately preceding text.) Applicants' perforations enable soil to enter to a degree when soil is in contact with the chamber sidewall. And slots must run horizontally or lengthwise along the chamber.

In conclusion of this part, the amended claims 1-6 and new claims 18-20 better define the invention, and should be allowed.

Further indicating patentability are some other points, which further counter the rejection:

Claim 2: Krothmann applied to Nichols would teach putting perforations on the top of the chamber to increase leaching area. So, the claimed invention is away from the teaching

Claim 3: Both the Nichols and DeTuillo patents teach planar sidewalls with perforations. As described in the related and incorporated by reference Brochu application, curved sidewalls present special problems with respect to slots or any perforation, and thus is not obvious that they are useful with inward flare perforations.

Claim 7 should be allowed for the following additional reasons. Although Shafly shows a base flange fin, Schafly also shows a two-piece chamber. Applicants' claim is to a one piece chamber. The reasons it is not obvious combination is because there is no way in the prior art of making a one-piece molded chamber with perforations which both (a) have basic axes sloped downwardly and (b) have the perforations lower than those which have axes above the elevation of the top of the fin. As pointed out in the first paragraph of page 9, the teaching of the prior art is to mold with outside slides, and with such it is impossible to make the claimed configuration, because the slide motion is blocked by the fin.

Claims 5 and 18 should at least be allowed as preferred embodiments of a patentable invention of the parent claim, as well as for the several other reasons presented.

Claim 18 should be allowed because the slots have ends (i.e., necessarily, since they are spaced apart horizontally); that there are no slots on the top; that walls are both curved and have uniformly axis-angled slots; and that the slots on one side of the chamber have axis-angles which are both uniform and uniformly different from those on the opposing side. The combination of references, as argued above, does not teach uniform axis-angling for inward flare slots, but slots have every-which-way axes; nor that those slots on one side of the article have a slope which is opposingly and uniformly different from the other side, a necessary result of the claim language. The prior art teaches that there be slots all around the article, with varying orientation, that there be slots on the top. It teaches that the slots be open-ended.

Claim 19 adds further to the non-obviousness of claim 18, with respect to soil entry.

Reconsideration of the rejection and allowance of the claims are requested.

Respectfully submitted,
D. SWISTAK ET AL.

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner of Patents, Box 1450, Alexandria VA 22313 on May 25, 2005

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C. G. Nessler

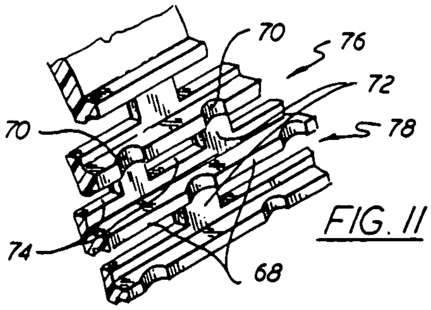

FIG. 11

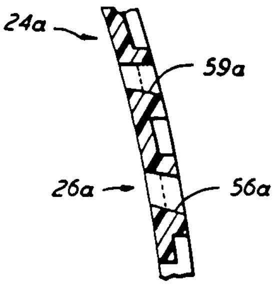

FIG. 8

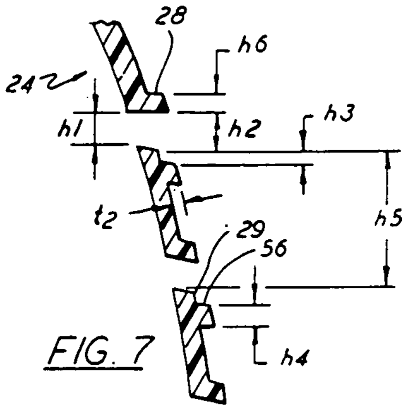

FIG. 7

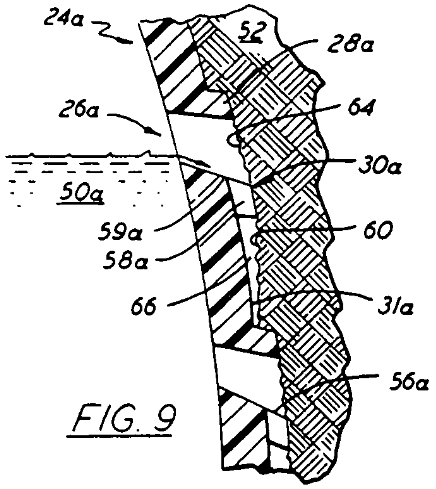

FIG. 9

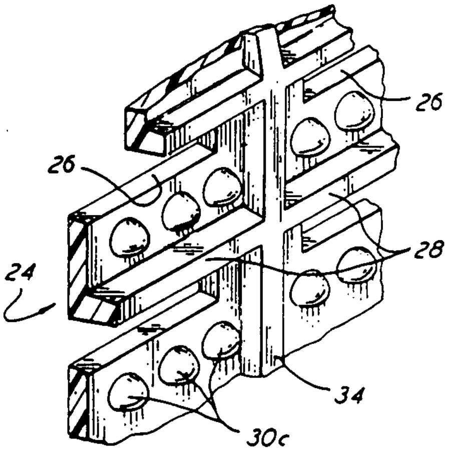

FIG. 10

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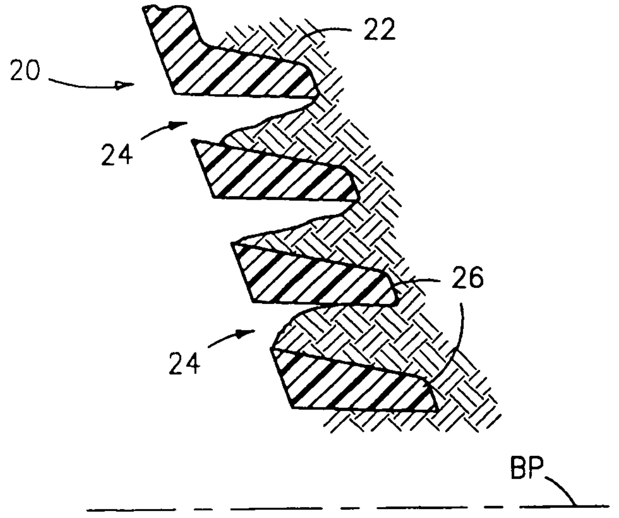

FIG-9A

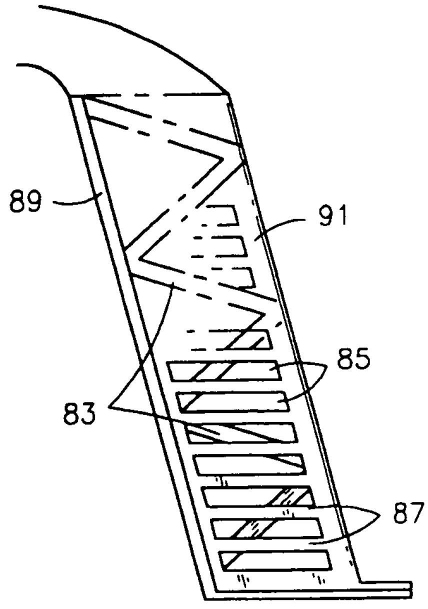

FIG-10

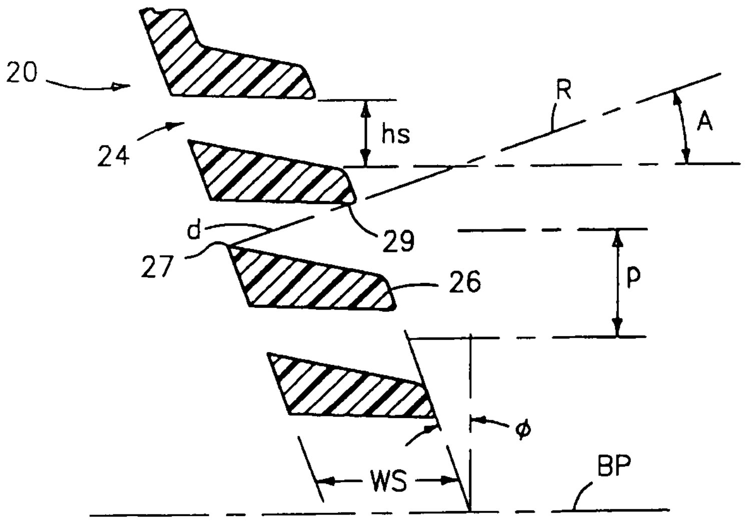

FIG-9B

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